S/081/61/000/013/018/028 B110/B205

AUTHORS:

Vaysberg, K. M., Zizin, V. G.

TITLE:

Spectrographic determination of vanadium and nickel in

petroleum products

PERIODICAL:

Referativnyy zhurnal. Khimiya, no. 13, 1961, 529, abstract 13M324 (Tr. Bashkirsk. n.-i. in-ta po pererabotke nefti,

1960, vyp. 4, 180 - 185)

TEXT: The weighed portion of the petroleum product was incinerated by the method of dry incineration, and the ash was dissolved in HCl. The acid was evaporated, the chlorides were dissolved in water, and the solution was boiled down to the volume required. In the solution obtained, the content of V and Ni was determined with an MCI-28 (ISP-28) spectrograph. The 0.02 mm wide slits were illuminated with a three-lens system, and the electrodes were projected onto the intermediate condenser. System, and the electrodes were projected onto the intermediate condenser. The spectrum was excited with a condensed spark obtained from an MI-3 (IG-3) generator. Titanium was used as a reference element. The results of the spectrum analysis were compared with those of the chemical and

Card 1/2

$\operatorname{Card} 2/2$	Spectrographic determination colorimetric analyses. The comparison showed analysis is sufficient for practical purposes. Complete translation.	S/081/61/000/013/018/028 B110/B205 that the accuracy of [Abstracter's note:	
Card 2/2			
Card 2/2	r .		
Card 2/2			

SHABALIN, I.I.; KRUGLOV, E.A.; VAYSBERG, K.M.

Spectral determination of naphthalene and its derivatives in gas oil from catalytic cracking. Knim.i tekh.topl. i masel 7 no.11:25-28 N '62. (MIRA 15:12)

(Petroleum produdts)

(Naphthalene-Spectra)

KUIAKOV, V.N.; VARFOLOMEYEV, D.F.; BONDARENKO, M.F.; KOTOVA, V.N.;
AKHMETOV, I.G.; KOLYCHEV, V.M.; NOSAL', G.I.; KIVA, V.N.;
PANKRATOVA, M.F.; KRUGLOV, E.A.; SHMELEV, A.S.; SHABALIN, I.I.;
SHIRMUKHAMETOV, O.A.; ISYANOV, I.Ya.; RATOVSKAYA, A.A.;
VAYSBERG, K.M.

Technology of the production of naphthalene from the refining products of eastern oils. Nefteper. i neftekhim. no. 4:30-33 (MIRA 17:5)

1. Nauchno-issledovatel skiy institut neftekhimicheskikh proizvodstv i ordena Lenina Ufimskiy neftepererabatyvayushchiy zavod.

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859120018-6

	G, K.M. Answer to E	.M.Fats' re	view.	Koks i khim.	no.3:60-61	164. (MIRA 17:4)
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KRUGLOV, E.A.; VAYSBERG, K.M.; ABHAMOVICH, Z.I.

Investigating the individual composition of the synthetic fatty acids of petroleum paraffins. Khim. i tekh. topl. i masel 9 no.5:36-38 5 My 64 (MIRA 17:7)

1. Nauchno-issledovatel skiy institut neftekhimicheskikh proizvodstv.

VAYSBERG, K.M.; KRUGLOV, E.A.; KHABIBULLIN, M.F.; SHABALIN, I.I.

Using the gas-liquid chromatography method for studying the various types of naphthalene. Koks 1 khim. no.3:44-47 163. (Mina 16:3) (Naphthalene) (Gas chromatography)

VAYSBERG, K.M.; SHABALJU, 1.1.; MASTLOW, Z.A.; SHEELEVA, M.A.; LETROVA, L.P.

Using gas chromatography and melecular spectroscopy in the quantitative analysis of naphthalens hydrocarbons Con - Con.

Khim. i tekh. topl. i massl 10 no.9:53-57 S 165. (MIRA 18:9)

1. Nauchno-issledovatel'skiy institut neftekhimicheskikh proizvodstv.

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859120018-6

PAVLOVA, Yu.N.; VAYSBERG, L.A.

Review of the book "Problems of anosthesiology and surgery in pulmonary diseases." Probl. tub. 41 no.5:86-28 '63.

(MIRA 17:1)

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VAYSBERG, L. A.; ROGACHIKOVA, T. A.

Anesthesia in surgery for laryngeal cancer. Vest. otorin. no.4: 36-39 '61. (MIRA 15:2)

1. Iz Moskovskoy gorodskoy onkologicheskoy bol'nitsy No. 62 (glavnyy khirurg-onkolog - prof. L. M. Nisnevich)

(LARYNX_CANCER) (ANESTHESIA)

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859120018-6

SAVONICHEVA, I.P., kand. med. nauk; VAYSBERG, L.A.

Experience in the use of anesthesia with separate intubation of the main bronchi in the surgical treatment of pulmonary tuberculosis. Khirurgiia 40 no.3:98-102 Mr '64.

(MIRA 17:9)

1. Nauchno-issledovatel'skiy institut tuberkuleza (dir.- kand. med. nauk T.P. Mochalova) Ministerstva zdravookhraneniya RSFSR, Moskva.

SAVONICHEVA, I.P., kand. med. nauk; VAYSBERG, L.A.

General anesthesia in surgery for pulmonary tuberculosis.

Prob. tub. no.1:36-42 '65. (MIRA 13:12)

1. Nauchno-issledovatel'skiy institut tuberkuleza (dir.- kand. med. nauk G.P. Mochalova, zamestitel' direktor po nauchnoy chasti - prof. D.D. Aseyev) Ministerstva zdravookhraneniya RSFSR, Moskva.

ACCESSION NR AM4021934

BOOK EXPLOITATION

s/

Vaysberg, Leonid Emmanuilovich

Control and organization of production in metallurgical plants (Upravleniye i organizatelya proizvodstva na metallurgicheskom zavode), Moscow, Metallurgizdat, 1963, 383 p. illus., biblio. Errata slip inserted. 3,650 copies printed.

TOPIC TAGS: industrial engineering, metallurgical plant, planning, automation, metallurgical plant administration

PURPOSE AND COVERAGE: The book considers the problems of production organization, the planning and administration of a modern metallurgical plant. The basic directions of technical progress in ferrous metallurgy, in the development of the modern metallurgical plant (combine), are pointed out. A great deal of attention is given to the problems of organizing work on the basis of combined graphs to assure progressive technical-economic indicators of shops and plants. Special chapters are devoted to the problems of the use and maintenance of equipment, powers curces, and material-technical supply of a metallurgical plant. The book is intended for engineers and technicians in ferrous metallurgy and can be useful to students in advanced courses of metallurgical higher educational institutions and departments.

Gard=1/3_

Photoelectric recording of infrared auroral spectra. Izv. SSSR. Ser. geofiz. no.1:166-167 Ja '61. (MIRA 1/2 (Auroras—Spectra) (Spectrum, Infrared)	AN (:1)

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859120018-6

VAYSBERG, M. Ya.

"Evaluation of Justification and Determination of the Effectiveness of Methods of Short-Term Hydrological Forecasts," Meteorologiya i Gidrologiya, Issue No. 1,

U-1442, 28 Aug 51

1949.

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VAYSHERG. N. (Sverdlovsk); VESELOV, N. (Sverdlovsk); ZINOV'YEV, Yu. (Sverdlovsk);

LECHOV, N. (Sverdlovsk).

("The economics of the socialist chemical industry." N.N. Kalmykov, S.A. Vnishein. Reviewed by N.Vaisberg and others) Von. ekon. no. 7:150-153 Jl '56. (Chemical industries) (MIRA 9:9)

(Kalmykov, N.N.)

(Vaishein, S.A.)
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SHIMANSKAYA, R.I.; PLYUSNIN, V.G.; VAYSBERG, N.S.

Use of pyrolysis tar from wastes of the synthetic alcohol manufacture. Khim.i tekh.topl.i masel 7 no.9:34-37 S '62. (MIRA 15:8)

1. Ural'skiy filial AN SSSR.
(Petroleum products)

ZIMOV'YEV, Yu.N., kand.ekonom.mauk; VAYSBERG, H.S., kand. ekon. nauk Raise the level of the training of chemical engineers in economics. Zhur.VKHO 10 no.4:451-452 '65.

(MIRA 18:11)

KURT, V.G.; VAYSBERG, O.L.

Starting regular observations of infrared coronal lines. Astron. tsirk, no.174:11-12 N '56. (MIRA 10:3)

1. Gosudarstvennyy asteonomicheskiy institut imeni P.K.Shternberga i Gornaya asteonomicheskaya stantsiya Glavnoy astronomicheskoy (Pulkovskoy) observatoriya. (Sun--Corona) (Spectrum, Solar)

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859120018-6

3(1)

Vayaberg, O.L. AUTHOR:

SOY/33-35-6-13/18

TITLE:

Light Absorption in a Mixture of Negative Ions

0, H and 0

PERIODICAL:

Astronomicheskiy zhurnal, 1958, Vol 35, Nr 6, pp 931-932 (USSR)

ABSTRACT:

The author gives the distribution of light absorption in several mixtures of negative ions. The results are represented in 3 figures: It turns out that the observed interstellar light absorption can in the best way be explained by assuming negative ions of molecular oxygen with a small admixture of

negative ions of atomic hydrogen.

There are 3 figures and 5 references, 1 of which is Soviet,

1 American, 1 Canadian, and 2 are English.

ASSOCIATION: Institut fiziki atmosfery Akademii nauk SSSR (Institute of

Atmospheric Physics of the AS USSR)

SUBMITTED:

May 13, 1958

Card 1/1

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859120018-6

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VAYSBERG, O.L.

First observations of auroral spectra with a photoelectric spectrometer. Izv. AN SSSR. Ser. geofiz. no.8:1277-1278 Ag 160. (MIRA 13:8)

1. Akademiya nauk SSSR, Institut fiziki atmosfery. (Auroras-Spectra)

3.1810

\$/049/60/000/008/015/015 E201/E191

AUTHOR:

Vaysberg, O.L.

TITLE:

First Observations of the Auroral Spectra Obtained with

a Photoelectric Spectrometer

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geofizicheskaya,

1960, No. 8, pp. 1277-1278

Beginning in November 1959 auroral spectra were TEXT: recorded at the "Loparskeya" station with a large-aperture photoelectric spectrometer. The optical parts of the spectrometer are shown schematically in Fig.1. A lens 1 projected the image of the aurora onto an entry slit 2. A rotatable mirror 3 and a collimator 4 directed the light onto a diffraction grating 5. The ruled area of the grating was 150 x 140 mm and it had 600 lines/mm; it concentrated light in the second order. A spherical mirror 6 produced a monochromatic image of the entry slit in the plane of the exit slit 7. A rotatable mirror 9 allowed the use of a second slit 10. Condenser lenses 8 and 11 projected light onto photomultiplier cathodes (not shown in Fig.1). Light filters were placed in front of the entry slit to select the required

Card 1/3

86213 \$/049/60/000/008/015/015 \$201/\$191

First Observations of the Auroral Spectra Obtained with a Photoelectric Spectrometer

The diffraction grating was rotated with an wavelengths. asynchronous motor; the scanning rate could be varied from 0.26 to 500 A/sec. Photomultipliers were of 637 -191 (FEU-19M) type. The sensitivity of the apparatus was checked by placing a phosphor loaded with radioactive carbon in front of the entry slit. amplifier was connected to the photomultiplier and the amplified signal was recorded with a potentiometer 3117-09 (EPP-09). shows a spectrum of a corona-type aurora of magnitude III. spectrum of Fig.2 shows the second positive system of N_2 , the negative system of N_2^+ , the first negative system of 0_2^+ , the 0 I line at 5577 A, other O I and O II lines, as well as N I and N II lines. It was found that hydrogen emission was usually strong in diffuse uniform auroral arcs observed to the South of active aurorae or other arcs. Hydrogen emission was not observed in the absence of visible aurorae or the band of No at 4709 A (Fig. 3).

Card 2/3

8621 3. \$/049/60/000/008/015/015 E201/E191

First Observations of the Auroral Spectra Obtained with a Photoelectric Spectrometer

Acknowledgements are made to <u>V.I. Krasovskiy</u> who directed this work and advised the author, to <u>Yu.I. Gal'perin</u> and <u>N.Y. Dzhordzhio</u> for their advice, and to <u>V.G. Babich</u> for help in experiments.

There are 3 figures and 3 references: 2 Soviet and 1 English.

ASSOCIATION: Akademiya nauk SSSR, Institut fiziki atmosfery

(Physics of the Atmosphere Institute, AS USSR)

SUBMITTED: March 10, 1960

Card 3/3

VAYSBERG O.L.

Possible mechanism of the retardation of the earth's rotation.

Astron.zhur. 38 no.3:545-549 My-Je '61. (MIRA 14:6)

l. Institut fiziki atmosfery AN SSSR. (Earth—Rotation)

S/169/62/000/011/069/077 D228/D307

3,1810

AUTHOR:

Vaysberg, O.L.

TITLE:

Spectro-electrophotometry of auroral hydrogen emis-

sion

PERIODICAL:

Referativnyy zhurnal, Geofizika, no. 11, 1962, 22-23, abstract 11G148 (In collection: Polyarn. siyaniya i svecheniye nochn. neba, no. 8, M., AN SSSR, 1962,

36-42 (summary in Eng.))

TEXT: Spectrophotometric $H_{\rm M}$ -line observations carried out at loparskaya (ϕ = 63°6, Λ = 126°7) are described. Recording was conducted in several selected sky areas in order to obtain the sky hydrogen-glow distribution during an aurora, and also to determine the glow region movement. Recording was also carried out of auroral forms in the background next to these areas. Since various emissions are registered at a different time in spectral scanning, recordings were doubled for control purposes. Observations showed that hydrogen emission is, as a rule, concentrated in one, mostly southerly

Card 1/3

Spectro-electrophotometry ...

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homogeneous arc. In the initial stage of an aurora this arc appeared to the south of zenith and moved southwards, when the lk-line intensity then increased. The intensity of the band (0.2) $N_2^+\lambda 4709$ R grew simultaneously. The arc usually reached $Z\approx 75-80^\circ$. Then a second (and sometimes a third) are appeared and also moved southwards; no Mg is detectable in it. 10-20 minutes after the visible approach of the arcs a group of rays passed along the upper arc from West to east, then bright active forms (auroral splashes) appeared. HB sometimes weakened after a splash and moved northwards. Apart from southerly homogeneous arcs, no intensification of the Ho -line as compared with background was detected in any auroral forms. A slow diminution of brightness with altitude was noted in a 'hydrogen The appearance of arcs with hydrogen emission only at large zenith distances and the failure of attempts to record such arcs at the zenith, together with the high angular spread and the slow brightness diminution in a 'hydrogen arc', lead to the supposition that a 'hydrogen arc' stems from a projection effect or from the Van Rein effect. The visible hydrogen field section is governed by the superposition of the altitudinal and the latitudinal glow dis-Card 2/3

S/169/62/000/011/069/077 D228/D307

Spectro-electrophotometry ...

tribution. The H $_{\rm B}$ -line was not once observed in the absence of visible glow, nor when the glow was sometimes very weak. Cases of diffuse hydrogen-emission glow were noted, too, over much of the sky to the north of zenith. The ratio of $I_{\rm H2}/I_{4709}$ g may reach 1.5

in hydrogen fields and is much less than 1 in all auroral forms. No detailed relation between the appearance of hydrogen emission and the variation of the magnetic field's H-component was detected. Hydrogen emission was absent on magnetically quiet days; bright hydrogen fields appear on nights with magnetic storms and intense auroras. Negative coils are connected with the southwards movement of the hydrogen field.

Abstracter's note: Complete translation 7

Gard 3/3

|S/169/62/000/011/070/077 |D228/D307

3,1810

AUTHOR: Vaysberg, O.L.

TITLE:

Spectro-electrophotometry of N2, N2+, OI, and NII

emission in auroras

PERIODICAL:

Referativnyy zhurnal, Geofizika, no. 11, 1962, 23, abstract 11G149 (In collection: Polyarn. siyaniya i svecheniye nochn. neba, no. 8, M., AN SSSR, 1962,

43-49 (summary in Eng.))

TEXT: Results are given for the photoelectric recording of several auroral spectra in the regions λ 3100-5600 R and λ 6000-9500 R. Besides the molecular band systems; the equipment's sensitivity allowed seven atomic lines to be recorded: λ 5577 R [OI], the doublet λ 6300-6364 R [OI], λ 8446 R [OI], λ 5200 R [NI], λ 5003 R [NII], and the hydrogen lines Ha and Ha. In auroral spectra it is hard to detect a sharp functional relation between any two emissions, for example the height dependence. The instrument's sighting beam usually intersects not one auroral form but a whole series of them -- Card 1/4

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Spectro-electrophotometry ...

(luminant layers at different heights). Therefore it is necessary to seek a tendency rather than a rigid relation. Observations showed that within the method's precision there is a constant intensity ratio between all nitrogen molecular band systems and the green line. No systematic difference in the ratio $I_{\rm INGN_2^+}$ + I/χ_{5577} g in

the upper and lower parts of radiant forms was detected. The second positive N₂ system correlates well with the first negative N₂+ system. The first positive N₂ system is more intense if the auroral brightness is low. The intensity of the infrared Meynel N₂+ system correlates well with the green line. In hydrogen fields the ratio of the intensity of bands of the Meynel N₂+ system to the green line is 1.8 times less than in auroral forms with no hydrogen emission. It was established that in the laboratory proton-beam excitation of nitrogen molecules the Meynel system is excited 10 times less effectively relative to the first positive N₂ system than in electron bombardment. Evidently, much of the glow in hydrogen fields is induced by encroaching proton flux. According to observational data no differences were also found in the relative intensities of molecular band systems and the green line in radiant and Card 2/4

S/169/62/000/011/070/077 D228/D307

Spectro-electrophotometry ...

homogeneous forms of the same brightness. The resolved oxygen line λ 8446 % behaves in auroras like the forbidden line λ 6300 % (its intensity lags behind the growth in the intensity of the green line, which can be taken as a measure of auroral brightness). The nonlinear dependence of the intensity of λ 8466 % on λ 5577 % and the different nature of its behavior in individual cases testify to the existence of two excitation mechanisms for the line λ 8446 %. It may be supposed that in bright low auroras λ 8446 % is excited by electron impact with a quite definite I_{8446} % $/I_{5577}$ % intensity ratio. An additional secondary mechanism must act at great heights. The line λ 8446 % behaves differently in a hydrogen field. Here we see an almost linear relation between the intensities of the lines λ 8446 % and λ 5577 %. This also speaks in favor of the fact that so-called "hydrogen arcs" are an effect of geometric projection. On the approach of a hydrogen field towards the horizon the instrument's sighting beam passes a very thick luminant layer, the brightness of emissions grows, and their ratio remains unchanged. This is actually observed for all emissions apart from λ 6300 %, whose intensity may also increase sometimes in hydrogen fields. There are Card 3/4

Spectro-clectrophotometry ...

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grounds for supposing that electron excitation also exists in hydrogen fields. The line λ 5003 \Re [NII] is on the average relatively more intense in hydrogen fields as compared with other auroral forms. Abstracter's note: Complete translation 7

Card 4/4

l₁5202 3/269/63/000/001/02**3/0**32 A001/A101

AUTHOR:

3.19.12

Vaysberg, O. L.

TITLE:

Spectroelectrophotometry of hydrogen emission in auroras

PERIODICAL:

Referativnyy zhurnal, Astronomiya, no. 1, 1963, 67, abstract 1.51.458 (In collection: "Polyarm, siyaniya i svecheniye noch, neba. no. 8", M., AN SSSR, 1962, 36 - 42, English summary)

TEXT: Observations of the H\$\beta\$ line were conducted at Loparskaya in 1959 - 1960. It has been established that its emission is not related to auroral shape. The H\$\beta\$ emission is concentrated in the hydrogen field extended along the geomagnetic parallel. The field extension in latitude amounts to 150 - 1000 km. With aurora development, the field is shifted southward. Owing to the effect of Van Rine, auroras have the shape of a uniform arc in observations at large zenith distances. Appearance of a hydrogen field precedes a bright aurora. H\$\beta\$ profiles agree with profiles obtained by other authors. No variations were detected in the H\$\beta\$ profile. There are 14 references.

T. Mulyarchik

[Abstracter's note: Complete translation]

Card 1/1

45203 8/269/63/000/001/024/032 A001/A101

AUTHOR:

Vayaberg, O. L.

TITLE:

The spectroelectrophotometry of emissions N2, N2, O I and N II in

auroras

PERIODICAL:

Referativnyy zhurmal, Astronomiya, no. 1, 1963, 67 - 68, abstract 1.51.459 (In collection: "Polyarm, siyaniya 1 svecheniye nochn. neba. no. 8", M., AN SSSR, 1962, 43 - 49, English summary)

TEXT: In 1959 - 1960 spectra of nuroras in the regions λ 3100 - 5600 and λ 6000 - 9500 were photoelectrically recorded at Loparskaya. A number of emissions was studied in the mentioned regions. No large difference in behavior of these emissions in different forms of auroras was discovered. The Meynel system No was an exception. In comparison with other emissions in hydrogen fields it was 1.8 times weaker than in other forms of auroras. The intensity ratio λ 6300/ λ 5577 dropped with the growth of intensity of λ 5577. The same regularity was observed also in λ 8446. Intensities of bands 2PGN₂ and 1NON² are well correlated with the

green line. The 1PGN, bands in weak auroras are excited relatively stronger.

Card 1/2

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The spectroclectrophot	ometry of		S/A	269/63/0 01/A101	000/0	01/02	4/032		
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L 1547-66 FSS-2/ENT(1)/FS(v)-3 TT/GS/CV

ACCESSION NR: AT5023583

UR/0000/65/000/000/0203/0205

AUTHOR: Vaysberg. O. L.; Shuyskaya, P. K.

TITLE: Anomaly in the pitch distribution of electrons

SOURCE: Vsesovuzneva konferentsiya po ilzike bosmicheskogo prostranstva. Poscov, 1965. Issledovaniya kosmicheskogo prostranstva (Space research); trudy konferentsii. Moscow, Izd-vo Nauka, 1965, 203-205

TOPIC TAGS: electron distribution, atmospheric interaction, upper atmosphere, space flight, space probe

ABSTRACT: Fitch distributions of electrons were obtained by means of charged-particle indicators installed on board the Kosmos-5 satellite, Wide pitch distributions were observed in the range of longitudes to the west of the South Atlantic anomaly. Harrowing of pitch distributions occurred at $\lambda \gtrsim 0^\circ$ up to $\lambda \gtrsim 20^\circ$, with greatest narrowing in the range of longitudes from ± 20 to $\pm 60^\circ$. The narrowing of the pitch distributions occurred at the exit from the anomaly, and the corresponding decrease in intensities observed in this region took place at heights ± 600 km, which makes it impossible to explain the effect only by scattering in the atmosphere. The effect was attributed at least partially to the presence of electric fields in the mag-

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orthor: Bolyunova, A. D.; Vayshers. emnyy, V. V.; Shuyskaya, F. K. emnyy, V. V.; Shuyskaya, F. K.
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emnyy, V. V.; Shuyskaya, F. K. ITLE: Preliminary results of particle studies using the "Elektron-1" satellite OURCE: Vsesoyuznaya konferentsiya po fizike kosmicheskogo prostranstva. Moscow, loveniya kosmicheskogo prostranstva (Space research); trudy konferentsii.
Wasayuznaya konferentsiya po fizike kosmicneskogo pisosa konferentsii.
OURCE: Vsesoyuznaya konferentsiya po fizike kosmicheskogo prostranstva. Noseleskogo prostranstva (Space research); trudy konferentsii.
965. Issledovaniya Rosmiton. 1965, 406-417 loscow, Izd-vo Nauka, 1965, 406-417
Moscow, Izd-vo Nauka, 1965, 400-41. TOPIC TAGS: particle physics, artificial earth satellite, satellite data analysis,
logic Tags: partition
there analyze data from the "Elektron-1" to determine the distribution of the satellite in Janu-
ABSTRACT: The authors analyze data from the "Elektron-1" to determine the distribution of radiation in the geomagnetic trap along the orbit of the satellite in Janution of radiation. At lower latitudes ($L < 2$) close to the equator, the dominating ary-March 1964. At lower latitudes of natural origin with energies of 20-200 kev and argument of the satellite in Janution of the satellite in Janution of the satellite in Janution of radiation in from electrons of natural origin with energies of 20-200 kev and argument of the satellite in Janution of the satellite in Janution of radiation in the geomagnetic trap along the orbit of the satellite in Janution of radiation in the geomagnetic trap along the orbit of the satellite in Janution of radiation in the geomagnetic trap along the orbit of the satellite in Janution of radiation in the geomagnetic trap along the orbit of the satellite in Janution of radiation in the geomagnetic trap along the orbit of the satellite in Janution of radiation in the geomagnetic trap along the orbit of the satellite in Janution of radiation in the geomagnetic trap along the orbit of the satellite in Janution of radiation in the geomagnetic trap along the orbit of the satellite in Janution of radiation in the satellite in Janution of the satellite in Janu
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particle flux is from electrons of hatches and from electrons artificially particle flux is from electrons of hatches and from electrons artificially intensity of up to 2·10 ⁹ particles·cm ⁻² ·sec ⁻¹ , and from electrons artificially deviated by the high-altitude explosion of 9 July 1962 with energies of several Mev jected by the high-altitude explosion of 9 July 1962 with energies of several Mev jected by the high-altitude explosion of 9 July 1962 with energies of several Mev jected by the high-altitude explosion of 9 July 1962 with energies of several Mev jected by the high-altitude explosion of 9 July 1962 with energies of several Mev jected by the high-altitude explosion of 9 July 1962 with energies of several Mev jected by the high-altitude explosion of 9 July 1962 with energies of several Mev jected by the high-altitude explosion of 9 July 1962 with energies of several Mev jected by the high-altitude explosion of 9 July 1962 with energies of several Mev jected by the high-altitude explosion of 9 July 1962 with energies of several Mev jected by the high-altitude explosion of 9 July 1962 with energies of several Mev jected by the high-altitude explosion of 9 July 1962 with energies of several Mev jected by the high-altitude explosion of 9 July 1962 with energies of several Mev jected by the high-altitude explosion of 9 July 1962 with energies of several Mev jected by the high-altitude explosion of 9 July 1962 with energies of several Mev jected by the high-altitude explosion of 9 July 1962 with energies of several Mev jected by the high-altitude explosion of 9 July 1962 with energies of several Mev jected by the high-altitude explosion of 9 July 1962 with energies of several Mev jected by the high-altitude explosion of 9 July 1962 with energies of several Mev jected by the high-altitude explosion of 9 July 1962 with energies of several Mev jected by the high-altitude explosion of 9 July 1962 with energies of several Mev jected by the high-altitude explosion of 9 July 1962 with energies of several Mev jecte
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Card 1/2

3107-66

ACCESSION NR: AT5023611

this same region with energies of tens and hundreds of Mev and an intensity of up to $\sim 5 \cdot 10^4$ particles cm⁻²·sec⁻¹ (E > 50 Mev). At middle latitudes (2 < L < 4) there is a sharp increase in the flux of soft protons with energies of a few hundred kev to intensities of no less than $^{\circ}10^{8}$ particles cm⁻²·sec⁻¹ at latitudes of 30-50° and apparently to no less than $\sim 3\cdot 10^8$ close to the plane of the equator at $L\sim 3$. Their spectrum is softer at higher latitudes. Both protons and electrons are observed at higher latitudes, the low energy electron component (E > 20 kev) being extremely variable, especially during increased geomagnetic activity. The boundary of the capture zone in the geomagnetic field during magnetic calm matches the outlines of the "momentary" polar aurora zone which reflects the diurnal asymmetry of the magnetosphere. "In conclusion, we are sincerely grateful to V. I. Krasovskiy, T. M. Mulyarchik, N. V. Dzhordzhio, M. L. Bragin, G. N. Zlotin, I. N. Kiknadze, I. D. Dmitriyeva, T. N. Zaglyadimova, A. K. Nazarova and G. A. Bordovskiy for great assistance in the work and for useful discussions." Orig. art. has: 8 figures and 1 table.

ASSOCIATION: none

02Sep65 SUBMITTED:

NO REF SOVE

ENCL: 00

008 OTHER:

SUB CODE: ES, NP

FSS-2/ENT(1)/FS(v)-3/FCC/ENA(d)/ENA(h) L 8118-66 ACC NR AP6000306 SOURCE CODE: UR/0293/65/003/006/0890/0902 Vaysberg, O. L.; Shuyskaya, F. K. AUTHOR: ORG: none TITLE: Distribution of electrons with B > 40 kev by pitch angles in the inner belt based on data of "Cosmos-5" 12 SOURCE: Kosmicheskiye issledovaniya, v. 3, no. 6, 1965, 890-902 TOPIC TAGS: satellite data analysis, satellite orientation, radiation belt, satellite stability, electron distribution, electron energy level ARSTRACT: In June 1962 observers succeeded in obtaining data over several critical revolutions of "Comos 5" on the distribution of directed intensity of electrons with energy > 40 leg by pitch angles at altitudes of 1,000-1,600 km. Distributions were plotted of the directed intensity in mirror points on natural geomagnetic coordinates B and L while preserving the magnetic moment. The width of pitch distributions and the correspondfing: B and L diagrams show the dependence on longitude (or on the local time of the observation point). On the average, the directed intensities computed by pitch distributions are in agreement with the measurements of intensities at an angle of 90° to the force line, which were made during other orbitings through the same drift envelope at longitudes close together. In Pacific longitudes, the directed intensity Card 1/2 mc: 550.388

E 8118-66

ACC NR: AP6000306

0

on the drift trajectories running in the region of the South-Atlantic anomaly at an altitude of 250 km reaches 2.106 electron/cm2.sec.strad for L = 1.5. The width of the pitch distribution remains large in the zone of the South-Atlantic anomaly and thereafter. At longitudes > 0° during the daytime the pitch distributions contract, and the intensity along the drift trajectories decreases correspondingly. This phenomenon evidently, cannot be entirely the result of Coulomb scattering. The variations observed in pitch distributions and intensities, their changes in individual orbiting revolutions, and the systematic decrease of pitch distributions and intensity at longitudes > 0° are a weighty argument in support of the existence in the magnetosphere of electric fields of ionospheric origin with a strength of up to 10-4-10-5 v/cm. At present, additional analysis of the available material is being conducted in order to evaluate the effect of diurnal and longitudinal factors on the pitch distribution of trapped particles. There are reasons to assume that the measurement of the variations of intensity and pitch angles of soft electrons, which play an important role in the excitation of auroras and in the energy balance of the upper atmosphere, may serve also as an effective means for the study of electric fields and circulation in the upper atmosphere and magnetosphere of the Earth. Orig. art. has: 5 formulas and 9 figures.

SUB CODE: AA, SV/ SUBM DATE: 27Feb65/ ORIG REF: 008/ OTH REF: 013/ ATD PRESS

Card 2/2

JD/GW IJP(c) L 14499-66

EWT(1)/EWT(m)/FCC/EWP(t)/EWP(b) SOURCE CODE: UR/0203/66/006/001/0135/0137

AP6006668 ACC NR:

Vaysberg, O. L.

ORG: Institute of Physics of the Atmosphere, AN SSSR (Institut fiziki atmosfery AUTHOR:

AN SSSR)

TITLE: On the pitch distribution of protons in auroras 17

SOURCE: Geomagnetizm i aeronomiya, v. 6, no. 1, 1966, 135-137

TOPIC TAGS: proton, aurora, angular distribution, radiation intensity, hydrogen emission, geomagnetic force line

ABSTRACT: It is assumed that some protons penetrate into auroras at low velocities. A detailed analysis of line profiles proved that at velocities of some hundreds of km/sec, the differential energy spectrum of particles changes according to the law E.-1.8, where E. is the initial energy of protons. The angular distribution of protons depends upon the profile accepted. The variability of results obtained using different profiles indicates that the proton distribution in auroras cannot be studied by the methods used for studying hydrogen. 1 Formulas are given for determining dependence of radiation intensity upon wavelength or

Card 1/2

UDC: 550.388.8

L 14499-66

ACC NR: AP6006668

Doppler velocity. The radiation intensity was taken from auroral spectra obtained at Loparskaya station. Hydrogen emission was obtained from an auroral belt 100—1000 km wide along a geomagnetic parallel. Integrating the formula of Doppler velocity, the number of hydrogen atoms which were decelerated in the atmosphere was found. Assuming similar deceleration for protons, the differential energy spectrum of penetrating protons can be determined. The spectrum determined by integration differs from that based on the independence of angular distribution of the energy spectrum. The capture of protons by geomagnetic force lines is possible when the proton direction of motion coincides with the force lines. Orig. art. has: 2 figures and 4 formulas.

SUB CODE: 04/ SUBM DATE: 07May65/ ORIG REF: 005/ OTH REF: 012/ ATD PRESS: 4/99

Card 2/2

"APPROVED FOR RELEASE: 08/31/2001

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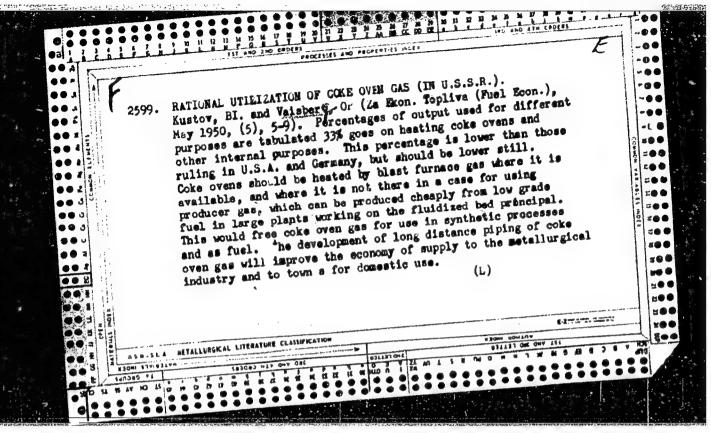
L 16987-66 EWT(1)/FCC ACC NR: AP6001540 SOURCE CODE: UR/0384/65/000/006/0024/0030 AUTHOR: Vaysberg, O. L. (Candidate of physico-mathematical sciences) ORG: none TITLE: The aurora SOURCE: Zemlya i Vselennaya, no. 6, 1965, 24-30 TOPIC TAGS: aurora, magnetic storm, sunspot, geomagnetic field, ionosphere ABSTRACT: This is a popular report on the occurrence of the aurora, its variety, its beauty and awesomeness, and the attention now being devoted to it, especially in regard to photographic records. Current knowledge of the aurora is reviewed: its association with magnetic storms and its possible relation to sunspots; the theory that the aurora is caused by a stream of charged particles from the sun following a complex path through the geomagnetic field; the occurrence of most auroral displays at heights of 95--120 km (though some have been observed at 80 km) with rays extending to 200-300 km and even, rarely, to 1000 km; the character of the auroral spectrum, consisting of bands of molecular nitrogen and oxygen and lines of atomic nitrogen and oxygen, indicating that the aurora is not due to Card 1/2

L 16987-66 ACC NR: AP6001540

electrical discharge in the atmosphere; lines of incandescent hydrogen and the red shift of these lines; and invasion of the atmosphere by low-energy electrons (about 10 kev), raising the temperature. The types of auroral displays are examined briefly. Those due to low-energy electrons as well as proton-generated types are dominant in polar regions. The "red arcs" of the middle and low latitudes are due to excitation luminescence of the electrical field in the ionosphere or to photochemical excitation. The author points out that we still have much to learn about this phenomenon. Orig. art. has: 9 figures.

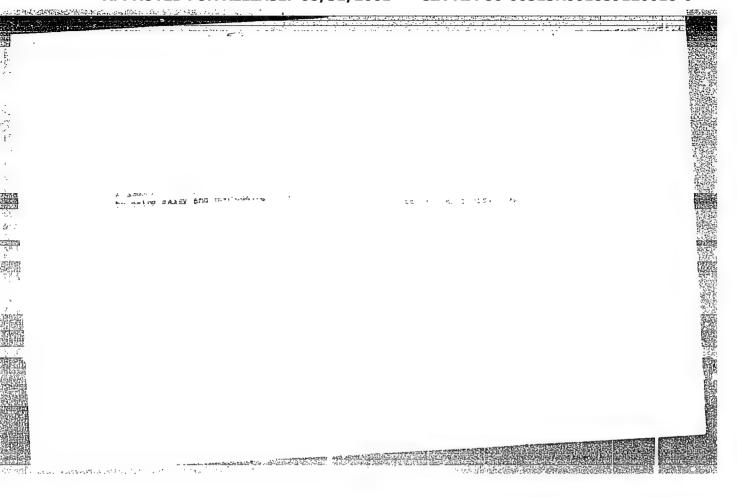
SUB CODE: C4/ SUBM DATE: none

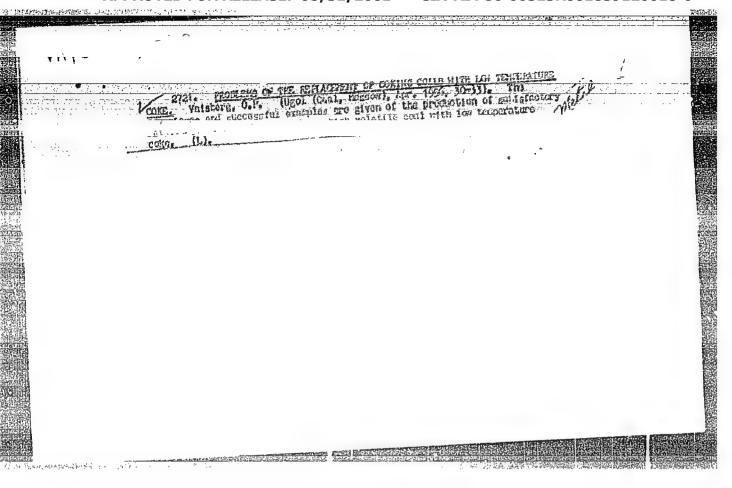
Card 2/2 7/195



- VAYSBERG, O. P.
- USSR (600) 2.
- Coal Preparation
- Optimum depth of concentrating Kizel coking coals. Ugol' 27, no. 12, 1952.

Monthly List of Russian Accessions, Library of Congress, March 1953. Unclassified.





VAYSEERG, O.P.kandidat ekonomicheskikh nauk.

On replacing coking ceal by semi-ceke. Ugel' 31 nc.4:30-33 Ap '56.

(MLRA 9:7)

1.Ukrainskiy uglekhimicheskiy institut.

(Ceke)

VAys beau, D.P

AUTHORS: Litvinenko, M.S. (Dr. of Tech.Sc.), and Vaysberg, 0.P., (Cand.Economic Sc.)

TITLE: Economics of the removal of sulphur from coke oven gas on the Southern Coke Oven Works. (Ekonomika izvlecheniya sery iz koksovogo gaza na koksokhimicheskikh zavodakh yuga).

PERIODICAL: "Koks i Khimiya" (Coke and Chemistry), 1957, No.5, pp.47-50 (U.S.S.R.).

ABSTRACT: The extent of the application of gas cleaning on Southern Works during 51-56 is shown in Table 1. Methods of utilising sulphur recovered from the gas are briefly discussed. It is concluded that the production of sulphuric acid which can be used on the spot is the most economical. Technicaleconomical indices of the production of sulphuric acid from pyrites and from hydrogen sulphide recovered from coke oven gas are compared in Table 2. Two methods of gas desulphurisation are compared - arsenate-soda and vacuo-carbonate. The volumes of constructional work involved for the above two methods of desulphurisation are compared in Table 3. The plant operating on the vacuo-carbonate method is chearer and simpler to build. The degree of desulphurisation of gas attained in 1956 on various Ukrainian works is compared, in Table 4, and from this it is concluded that both methods card 1/3

Economics of the removal of sulphur from coke oven gas on the Southern Coke Oven Works. (Cont.) 68-5-11/14 are comparable in the efficiency of desulphurisation, but the arsenate method presents difficulties due to a large volume (100m3/day) of highly poisonous effluent and high volume (100m3/day) of highly poisonous effluent and high soda consumption (400-500 kg/ton of sulphur). The costs of gas desulphurisation by the above two methods on various of gas desulphurisation the same basis for 1955 were as follows:

Works	Method of Cleaning	Costs per roubles	1000	Kopeks
-	arsenate-soda	0 2 3		68 00 71 90
Makevevsk	vacuo-soda	2		due +

High cleaning costs on the Makeyevsk Works were due to high power consumption. In 1956 the works replaced soda by potash which resulted in a considerable economy (30-35%) in potash which resulted in a considerable economy (30-35%) in power, steam and water consumption. The cost of cleaning power, steam and water consumption. The cost of cleaning decreased from 2.90 Roubles in 1955 to 1.75 Roubles in 1956. It is concluded that from works operating gas cleaning, the It is concluded that from works operating gas cleaning, the installation on the Makeyevsk works is the most economical. By utilising waste heat from the coke oven works for the

Card 2/3

Economics of the removal of sulphur from coke oven gas on the Southern Coke Oven Works. (Cont.) 68-5-11/14

regeneration of the absorbing solution, e.g., by utilising heat of ammonia liquor, as was done on the Kharkov works, a further decrease in cleaning costs can be obtained. A comparison of manpower required for cleaning gas by the above two methods (Table 5) indicates that the vacuocarbonate method in this respect is also more economical. On the basis of the above comparisons it is recommended that the vacuo-carbonate method of desulphurisation together with the production of sulphuric acid by wet catalgether with the production of sulphuric acid by wet catalgether with the construction of new plants based on the arsenate-soda method should be discontinued.

There are 5 tables and 3 Slavic references.

ASSOCIATION: UKhIN.

AVAILABLE:

card 3/3

VAYSBERG, O.P.

TITLE:

68-12-21/25

AUTHOR: Pozin, B.M.

On the Problem of the Economy of Purification of Coke Oven Gas from Hydrogen Sulphide (K voprosu ob ekonomike ochistki

koksovogo gaza ot serovodoroda)

PERIODICAL: Koks i Khimiya, 1957, No.12, pp. 49 - 50 (USSR)

O.P. Vaysberg (Koks i Khimiya, 1957, No.5). The present author criticises costs calculation used in the original paper and ABSTRACT: concludes that the matter of economy of vacuum carbonate and arsenical methods of gas purification should be widely discussed in the journal, Koks i Khimiya, so that objective conclusions can be reached.

Giprogazoochistka ASSOCIATION:

Library of Congress AVAILABIE:

Card 1/1

AUTHOR: Veysberg, O. P.

€8-50-6-12/21

TITLE:

On the Economy of Flotation of Coal Slurry and Dust (Ob ekonomike flotatsii ugol'nogo shlama i pyli)

PERIODICAL: Koks i Khimiya, 1958, Nr 6, pp 49-51 (USSR)

ABSTRACT: This is a contribution to a previous paper under the same title by P. Ye. Sekt, F. F. Teslenko, F. H. Belikov and S. A. Levin, published in Koks i Khimiya, Mr 8, 1957,

p 52. The present author considers that the present author considers that the investigations described in the original paper are insufficient for the determination of the economical effect of flotation of all coal fines on coal washeries

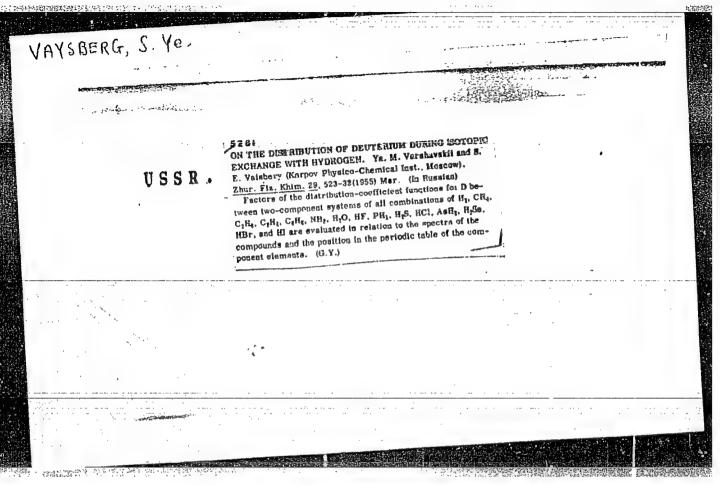
at coke oven works.

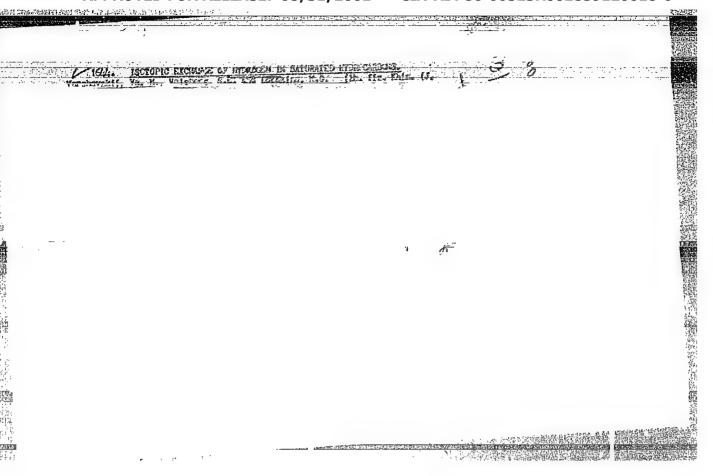
ASSOCIATION: UKhIN

1. Coal--Processing 2. Coal--Flotation

Card 1/1

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₹	eta	(Efficiency, Industrial)
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VAUSBERG, S.E.

USSR/ Chemistry - Physical chemistry

Card 1/2

Pub. 22 - 25/50

Authors

Varshavskiy, Ya. M., and Vaysberg, S. E.

Title

* About rules governing the equilibrium distribution of deuterium during isotopic hydrogen interchange reactions

Periodical

Dok. AN SSSR 100/1. 97-100, Jan 1. 1955

Abstract

Experiments show that the maximum possible deuterium distribution coefficient should occur during isotopic hydrogen exchange between the hydride of the most heavy alkali metal and one of the non-metal compounds of the first period. The equilibrium constant of the interchange reaction depends upon the nature of the statistical deuterium distribution between the reacting molecules and upon the various degree of hetero-dynamism of the

Institution: The L. Ya. Karpov Scientific Research Phys-Chemical Institute

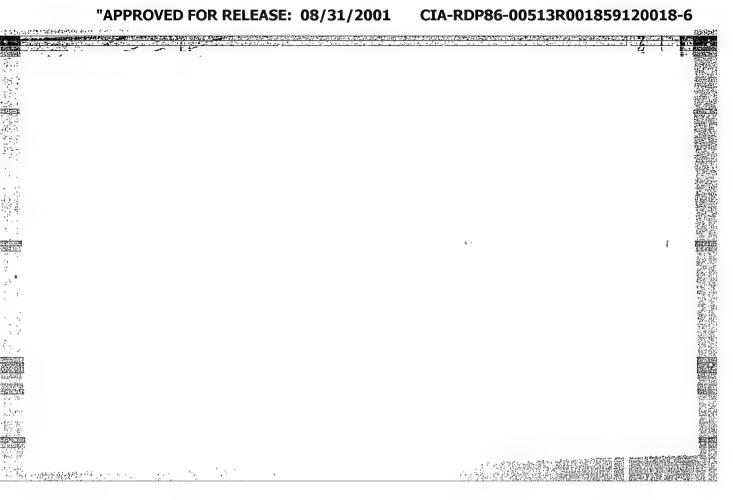
Presented by: Academician V. A. Kargin, July 27, 1954

Periodical: Dok. AN SSSR 100/1, 97-100, Jan 1, 1955

Card 2/2: Pub. 22 - 25/50

Abstract: hydrogen isotopes in the molecules of both substances. It was established that the very same deuterium distribution rules pertain also to tritium as well as isotopes of other monovalent elements except that the distribution effects will be different. Five references: 4

USSR and 1 USA (1947-1954). Tables; diagram.



SBERG, S.E.

AUTHORS:

74-12-4/4 Varshavskiy, Ya. H., and Vaysberg, S. E., (Moscow).

TITLE:

Thermodynamic and Kinetic Peculiarities of the Isotope-Exchange-Reaction of Hydrogen (Termodinamicheskiye i kineticheskiye osobennosti reaktsii izotopnogo obmena vodoroda).

PERIODICAL:

Uspekhi Khimii, 1957, Vol. 26, Nr 12, pp. 1434-1468 (USSR).

ABSTRACT:

Deuterium is of particularly great importance especially in organic chemistry, because it makes it possible to determine the way taken by hydrogen in chemical reactions by means of marked atoms. The exchange velocity can serve as a criterion for the structure and the preparedness of reaction of various substances. The article compris ses the most important research results in the field of the thermodynamics and kinetics of the isotope exchange reaction of hydrogen; in this connection also general rules governing isotope exchange reaction are derived. The following chapters are dealt with:

The thermodynamics of isotope exchange.

The connection between the distribution coefficient of isotopes a) and the equilibrium constant of the isotope exchange reaction.

Methods for the statistical computation of equilibrium in iso=

tope exchange.

Card 1/2

Rules governing the deuterium distribution in the isotope ex= c)

Thermodynamic and Kinetic Peculiarities of the Isotope-Exchange- 74-12-4/4 Reaction of Hydrogen.

change of hydrogen.

- d) Experimental data concerning the distribution of the equilibrium of deuterium in isotope exchange reactions of hydrogen.
- II) Some details concerning the reaction kinetics of isotope exchange:
- a) General problems.
- b) On the kinetic equation of the isotope reaction.
- c) Limits of the applicability of the kinetic equation of first order.

There are 2 figures, 5 tables, and 76 references, 36 of which are Slavic.

AVAILABLE:

Library of Congress.

1. Hydrogen-Reaction 2. Isotope exchange-Thermodynamics

Card 2/2

USCOMM-DC-54784

AUTHORS:

Varshavskiy, Ya. H., Vaysberg, S. E.

76-32-2-32/38

TITLE:

On the Limits of Applicability of the First Order Kinetic

Equation for Isotopic Exchange Reactions

(O granitsakh primenimosti kineticheskogo uravneniya pervogo

poryadka dlya reaktsiy izotopnogo obmena)

PERIODICAL:

Zhurnal Fizicheskoy Khimii, 1958, Vol. 32, Mr 2, pp. 454-459

(USSR).

ABSTRACT:

The authors investigate the problem concerning the limits of applicability of first order equations for reactions of isotomic exchange in dependence upon the degree of deviation of the quantity a (distribution coefficient of isotopes) from unity. The investigation is carried out with the example of a bimclemular reaction where any dissociation reaction intendedly is expressed by a first order equation (as its velocity is limited by the dissocolation of a component), the greatest part of the association reaction, however, apparently still is bimolecular. The kinetic equation for the reaction of isotopic exchange (taking place according to bimolecular mechanism) is deduced. It is shown that this equation is one of second order and practically becomes

Card 1/3

On the Limits of Applicability of the First Order Kinetic Equation for Isotopic Exchange Reactions

76-32-2-32/38

a first order equation only on certain conditions. For this, one of the following three conditions is sufficient: 1. - When the coefficient of equilibrium distribu tion of the isotopes is close to unity. 2. - A small concentration of that component in which the accumulation of the respective isotope is measured. 3. - Small concentration of that isotope in the system the accumulation of which is measured in the respective component. It is shown that the deviation of the velocity constant of the bimolecular reaction in the isotopic exchange continuously increases from the velocity constant calculated according to the first order equation with the increase of the exchange proportion, and that it tends towards a certain maximum. This maximum is not greater than twice the mini= mum value corresponding to the beginning of the exchange. For a number of values of the isotopic distribution coefficient the corresponding maximum deviations are calculated which practi= cally can occur within the range of the concentration changes of the component and of the isotopes. The extent of this deviation makes it possible to estimate the degree of non-conformity between the velocity constant and the kinetic equation of first order and to determine the limits of applicability of this equation,

Card 2/3

On the Limits of Applicability of the First Order Kinetic Equation for Isotopic Exchange Reactions 76-32-2-32/38

There are 2 figures, and 12 references, 5 of which are Soviet.

ASSOCIATION: Physico - chemical Institute imeni L. Ya. Karpov, Moscow

(Fiziko-khimicheskiy institut im. L. Ya. Karpova, Hoskva)

SUBMITTED: April 15, 1957.

1. Exchange reactions--Mathematical analysis

Card 3/3

5(4) AUTHORS:

Varshavskiy, Ya. M., Vaysberg, S. E., Trubitsyn, B. A.

507/20-122-5-23/56

TITLE:

The Equilibrium Distribution of Deuterium in Hydrogen Exchange With Liquid Hydrogen Chloride (Ravnovesnoye raspredeleniye deyteriya pri vodorodnom obmene s

shidkim khloristym vodorodom)

PERIODICAL:

Doklady Ahademii mank SDSR, 1958, Vol 122, Nr 5,

pp 031 - 833 (USSR)

ABSTRACT:

The present paper deals with the first investigation of the deuterium exchange in liquid hydrogen chloride;

the isotope-equilibria in several systems which contain hydrogen chloride are investigated. Some earlier papers are first discussed. It was of importance, above all, to obtain a reliable value of the distribution coefficient α of the deuterium for the isotopic equilibrium between hydrogen chloride and the aromatic C-H-bond and to compare its value

Card 1/3

with that of a for the case of an O-H bond and an aliphatic C-H bond. Knowledge of these quantities

The Equilibrium Distribution of Deuterium in Hydrogen 507/25-122-5-25/58 Exchange With Liquid Hydrogen Chloride

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is of importance also for the investigation of deuteron exchange with liquid hydrogen chloride at present being carried out by the authors. The cuthors investigated the equilibrium distribution between hydrogen chloride and bennene, cyclopentane, and also water. These investigations were carried out on liquid-phase systems under pressure. After the establishment of equilibrium, the liquid hydrogen was vaporized and the water obtained by neutralization was then investigated with respect to its deuterium content. The carrying out of measurements is discussed in short. In isotope-exchange, equilibrium was attained from both sides by carrying out experiments with direct and inverse exchange. The tests concerning icotope exchange in hydrocarbons were carried out with an aluminum-chloride catalysis. The data thus obtained are compiled in a table. They permit the following conclusion to be drawn: At one and the same temperature the values obtained for the isotope

Card 2/3

The Equilibrium Distribution of Deuterium in Hydrogen 507/20-122-5-25/56 Exchange With Liquid Hydrogen Chloride

> exchange of hydrogen chloride with compounds containing an O-H bond and also an aromatic or aliphatic O-H bond are found to agree in practice. The hydrogen exchange (in the presence of AlCl_x) between liquid hydrogen chloride and a saturated hydrocarbon that contains no third carbon atom is of special interest. Liquid hydrogen chloride is suited for the investigation of the suitability of organic compounds for the reactions of electrophile substitution by the method of deuteron exchange. There are 1 figure and 12 references, 9 of which are Soviet.

ASSOCIATION:

Fiziko-khimicheskiy institut im.L.Ya.Karpova (Physico-

Chemical Institute imeni L.Ya.Karpov) June 9, 1958, by V.A.Kargin, Academician

PRESENTED: SUBMITTED:

June 9, 1950

Card 3/3

SAVIN, A.G.; VAYSBERG, S.E.; KARPOV, V.L.; TIKHOMIROVA, N.S.

Diffusion of gases in polymers being subjected to ionizing radiation, Vysokom. soed. 7 no.8:1427-1429 Ag '65. (MIRA 18:9)

1. Fiziko-khimicheskiy institut imeni L.Ya.Kerpova AN SSSR, Moskva.

VAYSBERG, S.E.; VARSHAVSKIY, Ya.M.

Dual-temperature hydrogen isotope exchange between a gas-vapor mixture and a solution of the gas. Zhur.fiz.khim. 37 no.1:87-93 Ja '63. (MIRA 17:3)

1. Fiziko-khimicheskiy institut imeni L.Ya.Karpova.

VAYSBERG, S.E.; VARSHAVSKIY, Ya.M.

Di-temperature deuterium exchange in the system water-hydrogen chloride. Zhur.fiz.khim. 37 no.2:307-309 F 763. (MIRA 16:5)

1. Fiziko-khimicheskiy institut imeni L.Ya. Karpova.
(Hydrochloric acid) (Water) (Deuterium)

29825 \$/020/61/140/006/024/030 B107/B101

5.2430 AUTHORS:

Varshavskiy, Ya. M., and Vaysberg, S. E.

TITLE:

Equilibrium distribution of tritium in isotopic exchange of

hydrogen

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 140, no. 6, 1961, 1361-1363

TEXT: Data for calculating the equilibrium constants and the distribution ratio protium - tritium by the method by Urey (Ref. 1, see below), Bigeleisen - Mayer (Ref. 2, see below) and V. M. Tatevskiy (ZhFKh, 25, 261 (1951)) are not available up to date. The present work gives a method for calculating roughly the distribution ratio protium - tritium by means of the so-called \$\beta\$ factors. These \$\beta\$ factors (Ya. M. Varshavskiy, S. E. Vaysberg, Usp. khim., 29, 1434 (1957)) are a quantitative measure for the thermodynamic inequality of two isotopes of an element in a certain substance. In first approximation, they depend only on the number of outside electrons and occupied electron shells. Thus the β factors of CH_A , NH_3 , and H_2O are all about equal to the eta-factor of HF. The eta factors for the tritium - protium exchange in diatomic hydrides (including free radicals) may be calculated Card 1/5/2_

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Equilibrium distribution of ...

S/020/61/140/006/024/030 B107/B101

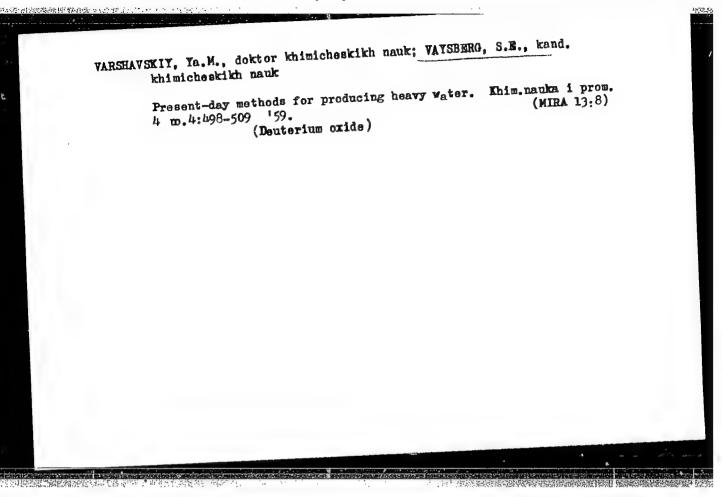
from the vibration frequencies of the hydride (ν_H) and the tritide (ν_T) : $\beta = (\nu_T/\nu_H) \left\{ \left[1 - \exp(hc\nu_H/kT) \right] / \left[1 - \exp(-hc\nu_T/kT) \right] \right\} \exp\left[(-hc/2kT) (\nu_H - \nu_T) \right]$. The β factors for the tritium - protium exchange at 20°C are listed in Table 1 and represented as function of the atomic number in Fig. 1. Table 2 gives the calculated distribution ratios at 20°C. $(\alpha = \beta_1/\beta_2)$. There are 1 figure, 2 tables, and 9 references: 6 Soviet and 3 non-Soviet. The three references to English-language publications read as follows: Ref.1: H. C. Urey, J. Chem. Soc., 1947, 562; Ref.2: J. Bigeleisen, M. Mayer, J. Chem. Phys., 15, 261 (1947); Ref. 8: P. Stats, H. Morgan, J. Goldstein, J. Chem. Phys., 24, 916 (1956).

ASSOCIATION: Institut radiatsionnoy i fiziko-khimicheskoy biologii Akademii nauk SSSR (Institute of Radiation- and Physicochemical Biology

of the Academy of Sciences USSR)

PRESENTED: May 23, 1961, by A. N. Frumkin, Academician

SUBMITTED: May 23, 1961 Card 2/80

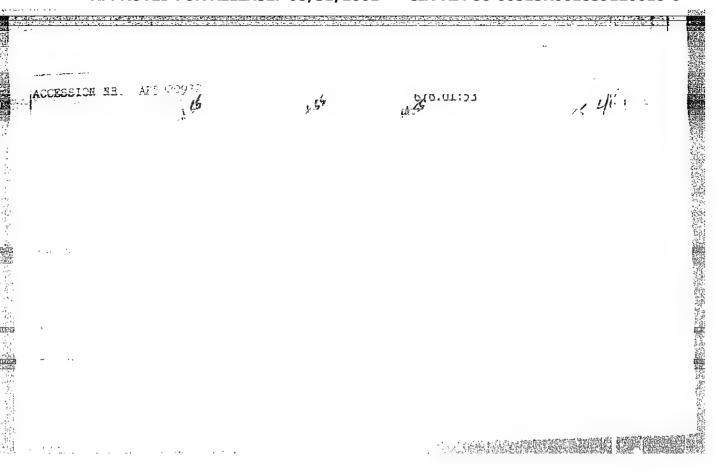


PAIRTSKIY, G.V.; DANCHENKO, B.K.; CHERNYAYEV, A.F.; ZAGRANICHNOV, G.A.; VAYSHERG, S.R.; YERISKIN, K.I.

Decreasing the distance between electrodes in electrolyzers.

Prom.energ. 15 no.3:20 Mr '60. (MIRA 13:6)

(Blectrolysis) (Hydrogen)





BAKLAYEV, Ya.P.; OVCHINNIKOV, L.N., prof., doktor geol.-min.nauk, otv. red.; VAYSBERG, S.I., red.; IZMODEMOVA, L.A., tekhn.red.

[Geology and potential of the Tur'insk contact-metasomatic deposits of copper in the northern Urals] Geologicheskoe stronie i perspektivy Tur'inskikh kontaktovo-metasomaticheskikh mestorozhdenii medi na severnom Urale. Sverslovsk. 1959. 141 p. (Akademiia nauk SSSR. Ural'skii filial. Sverdlovsk. Gornogeologicheskii institut. Trudy, no.37) (MIRA 13:2)

(Tur'insk region-geology)

s/076/63/037/002/006/018 B101/B186

AUTHORS:

Varshavskiy, Ya. M. (Moscow)

TITLE:

Investigation of the two-temperature exchange of deuterium in the system water - hydrogen chloride

PERIODICAL:

Zhurnal fizicheskoy khimii, v. 37, no. 2, 1963, 307-309

TEXT: It was sought to determine efficiency of two-temperature columns, which is important for the concentration of deuterium, and to compare it with that of rectification. For this purpose, di-temperature isotopic separation of hydrogen was effected in counter-current columns in the system hydrochloric acid - gas-vapor mixture of hydrogen chloride and water. The deuterium content of the water was 0.65 at%, that of the hydrochloric acid 0.61 atio. Results: The two-component state of the phases may lead to a shift in the enrichment peak to beyond the current ratio λ , equal to the partition factor a of deuterium. Maximum enrichment in the given system partition ractor α or deducerium. Maximum entremment in the given at column temperatures of $t=17^{\circ}C$ and $t^{\dagger}=90^{\circ}C$ corresponded to λ = 2.7-2.9, whereas α_{170} = 2.53. The ratio ψ between the HET on rectification of water and the HET on di-temperature isotopic exchange has

Card 1/2

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859120018-6"

S/076/63/037/002/006/018 B101/B186

Investigation of the two-temperature ...

been found equal to 0.4. There are 1 figure and 1 table.

ASSOCIATION:

Fiziko-khimicheskiy institut im. L. Ya. Karpova

(Physicochemical Institute imeni L. Ya. Karpov)

SUBMITTED:

August 17, 1961

Card 2/2

BICHKOVA, K.I. [Bychkova, K.I.], kand.med.nauk; VAYSBERG, S.Ya. [Vaisberh, S.IA.], kand.med.nauk

Functional changes under the influence of antiallergic actions in hemorrhagic syndromes in children. Ped., akush. i gin. 23 no.6: 31 161. (MIRA 15:4)

1. Kafedra pediatrii Donetskogo meditsinskogo instituta. (HEMOPHILIA)

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AUTHOR: UkrSGB3:	Bazelyen. Vageberg,	L. L.;	Braude. Krymkin	S. Ya.	(Corre	spondi , 4. Y	ng membe: .: Sodin	r AN , L. G.	
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BRAUDE, S. Ya.; VAYSBURG, V.V.

Distribution of the caal and nonthermal radiation components over the galactic disc. Izv. vys. ucheb. zav. radiofiz. 7 no.2:193-201 '64 (NIRA 18:1)

1. Institut radiofiziki i elektroniki AN UkrSSR.

"APPROVED FOR RELEASE: 08/31/2001

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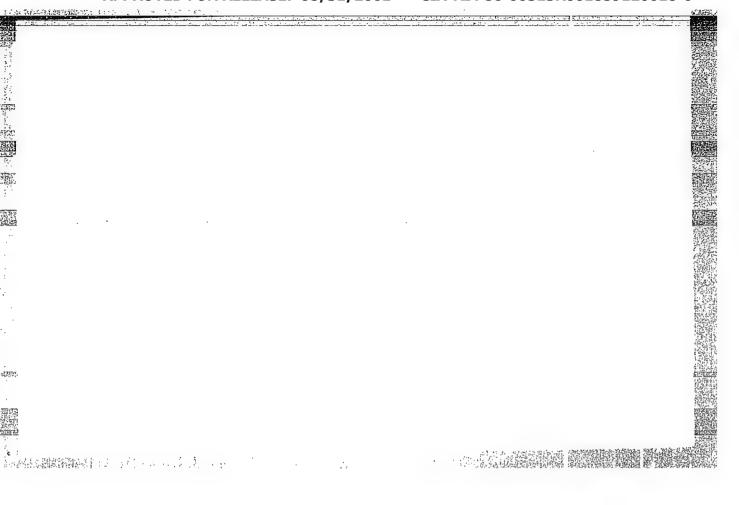
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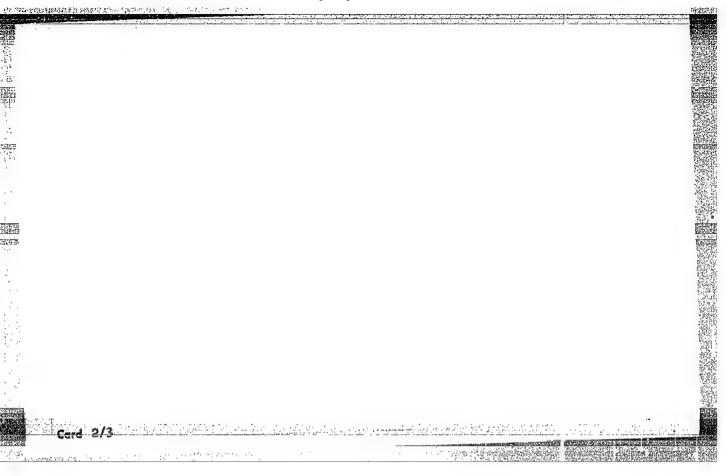
SCOIN 1.2.

Class of the spectra of crancete coasis reals satisfic molecus of frequencies below 10 No. Fairon. Thee, A2 no. 1512-628 Ny. 56 195.

(KIRA 1915)

1. Statibus radiofiziki i elektrostki IN Varitti.







AUTHOR: baselyar, L. L., brank, J. (a., vayoterg, Y. Y., Krymkin, . 7.

Men', A. V.; Sodin, L. G.

TITLE: Investigation of the spectra of discrete cosmic radio emission sources at frequencies below $\frac{1}{2} \sqrt{\frac{1}{2}} \frac{1}{2} \sqrt{\frac{1}{2}} \frac{1}{2}$

SOURCE: Astronomicheskiy zhurnal, v. 42, no. 3, 1965, 618-628

TOPIC TAGS: cosmic radio emission radio emission source, radio emission measurement, radio belos up

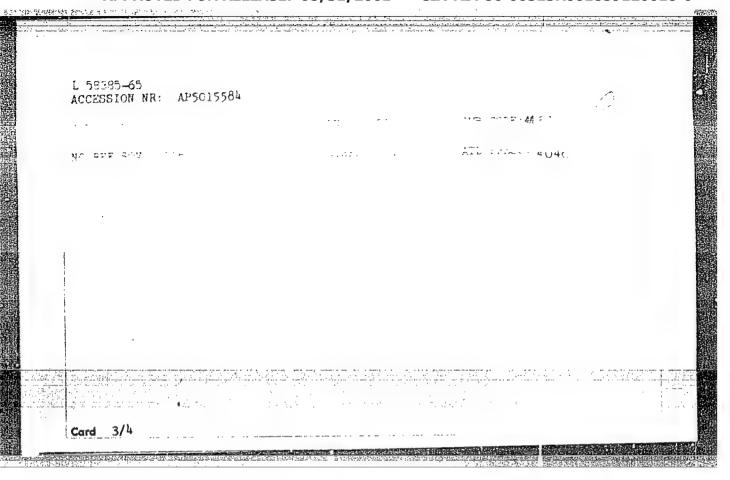
ABSTRACT: The spectra of 14 discrete sources (in the 20-40-Mc range) were investigated at the Fall. Astronomy colorates to the institute of wall conversa

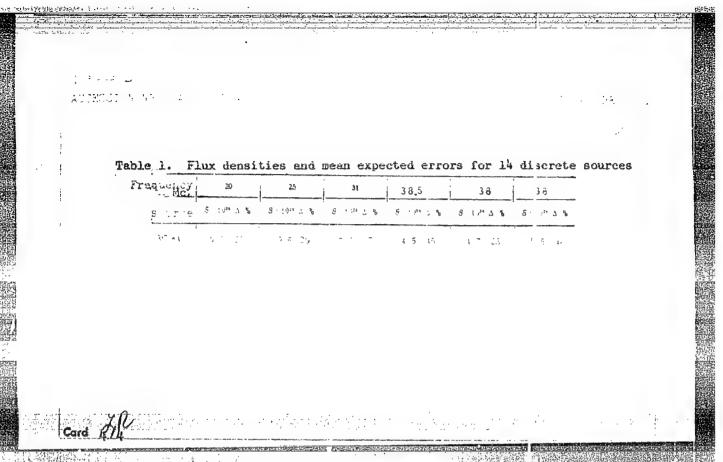
470 m apart on an east-west line. Each array consisted of 178 horizontal dipoles. Pattern width was 4° for 20 Mc and 2° for 40 Mc. Lobe width of the interference

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pattern was 1.6° for 20 Mc and 0.8° for 40	Mc. Beam declination along	the meridian
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indulated by phase defining the signal of the	គ តិវត្ត លោវតាហា គ្នា វ ក្សាស្ត្រ	7 7 9° 9
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constant spectral index from 20 to 1400-	-3200 Mc (13 sources) and sp	ectra With
spectral index which is a function of the	e frequency (5 sources). Or	ig. art. has:
figures and 2 tables.		[DW]
SSOCIATION: Institut radiofiziki i elektr of Radio Physics and Electropics, Aladele :		(Institute





APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859120018-6"

Committee

VAYSBERG, Ya.D.

Horizontal spaces between underground utility installations. Stroi. truboprov. 8 no.3:15-17 Mr '63. (MIRA 16:5)

1. Nachal'nik tekhnicheskogo otdela instituta Lengiproinzhproyekt, Leningrad. (Pipelines)

YAKOVLEV, A.T.; VAYSBERG, Ya.D.; GORSHKOV, V.A., red.

[Designing city gas mains] Proektirovanie gorodskikh gazoprovodov. Moskva, Izd-vo M-va kommun.khoz.
RSFSR, 1963. 163 p. (MIRA 17:6)

Civing up the hydraulic testing of gas pipelines after their placement on supports. Stroi. truboprov. 9 no.6:36-37 Je '64.

(MERA 17:12)

1. Lengiproinzhproyekt, Leningrad.

